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Some Features of General Practice*

By

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STRANRAER.

Variety is a salient feature of any general practice but the differences in the problems encountered and the variety of methods of dealing with them from district to district are quite remarkable. I hope therefore that the few remarks I intend making this afternoon about several different subjects may be of interest to you and that they will stimulate an interesting discussion.

Radiography

First of all, something about X-rays. Radiography has but a limited field in the large animals, being more or less restricted to the extremities of the limbs and possibly the head and neck, but in these situations the X-ray frequently is of the greatest value in establishing a definite diagnosis. Unfortunately there is a paucity of informative literature on X-ray diagnosis, especially in the large animals. Wishing to gain a little experience in this connection, I took the opportunity, as it arose, of boiling out a foot or two to see what one could really hope to be told by the X-ray negative.

The problem is difficult, and I feel that to become in any way confident in interpreting X-ray negatives, especially of the horse's foot, a considerable amount of experience is necessary.

Some conditions, of course, are quite obvious at a glance, but other plates require careful study before an opinion can be given.

(*a*) The first plate [exhibited: see Fig. 1] is a simple one—it is of the fetlock of an aged pony that had been lame for a long time. The fetlock was enlarged and from the nature of the lameness a diagnosis of sesamoiditis was fairly obvious on clinical examination. However, the owner stated that the animal had been shot at by a soldier and that it was later found to have a wound of the fetlock which discharged for some time and then healed up, but the lameness had persisted, and he felt sure that the bullet must be lodged about the fetlock.

As you will see, no bullet is in evidence and the exostosis of the sesamoids shows up very clearly, especially when you compare it with the negative [exhibited] of the other fetlock, which is normal.

(*b*) The next is not so straightforward, but there is no doubt that the pathological condition in the foot really shows up quite clearly when the plates are compared with the boiled-out bones. The subject was a Clydesdale gelding, aged seven years, which had been lame for about six months. Blistering of the hoof head and putting out to grass did not effect a cure and I was asked to examine the animal.

I decided to X-ray the foot, but before this was arranged the animal was killed by lightning, which was probably fortunate from an insurance point of view. I had the leg cut off and X-rayed it before boiling out.

You can see the exostosis on the surface of the second phalanx quite clearly and the ulceration of the articular surface shows up as a small shadow. [Fig. 2.]

(*c*) This is very similar to the preceding but the pathological changes are much more marked.

The subject was a three-year-old Clydesdale gelding which had been lame for a year or more. The ringbone was easily palpable and was diagnosed as the cause of the lameness. As an experiment I injected absolute alcohol into both plantar nerves instead of performing neurectomy. Unfortunately my unit was out of order at this time so that I was unable to take a radiograph of the foot. However, the animal was going sound a week after the injection and continued so for over six months when it was again reported lame.

I did not like the look of the foot when I examined it and concluded that breakdown was occurring. Swelling of the lower leg rapidly ensued and destruction was advised and carried out. The leg was cut off and X-rayed before boiling out.

The very gross changes in the foot are apparent in the plates [exhibited, including Fig. 3]. Note the exostosis on all the phalanges, the fracture of the os pedis, and the shadow resulting from the ulceration of the articular surface. The swelling and cellulitis are also obvious. It is a pity that there is no radiograph of the foot before the nerves were injected. I think it is fairly clear that the exciting cause was a picked-up nail, penetrating the region of the navicular bone.

(*d*) The last negative is quite recent. The subject was a pony which had had several bouts of slight lameness which always passed off with exercise, but which latterly had become persistent.

The owner was fairly sure the seat was in the shoulder, as nothing of significance could be found in the foot. Plantar nerve block, however, proved the foot to be the seat and a radiograph was then taken. The only abnormality visible is a slight exostosis of the dorsal aspect of the second phalanx. Deep point firing and blistering was carried out and sufficient improvement has taken place to raise our hopes that the animal may become sound in time.

Intravenous Use of Chloral Hydrate

Efficient restraint is an exceedingly important factor in working with animals. In the old days, when innumerable men could be found on a farm and rope was plentiful, the main consideration was the safety of the operator. He at least did not feel any pain and the animal received scant sympathy. With the introduction of the Anaesthetics Act, however, anaesthesia, local or general, became obligatory for certain operations on humane grounds.

Nevertheless, in my opinion, nowadays, this reason for the use of anaesthetics, laudable as it is, is only a minor one; and considerations of expediency, facility of application, the avoidance of forceful restraint, and safety in use have become the reasons for, and the criteria in, the use of anaesthetics.

Choral hydrate, given by mouth, has for long been in common use as a narcotic, to facilitate the induction of chloroform anaesthesia. Excitement is avoided, casting made easier and the chances of syncope are much reduced. But the exertion of casting the animal is still considerable. Administering chloroform standing was an attempt to overcome this, but is not the answer.

The use of chloral hydrate, intravenously, however, revolutionises the whole process. I doubt if even the most ardent animal lover could find fault with the technique and at the same time the needs of the veterinary surgeon are completely satisfied.

The animal needs no special preparation beforehand, as far as the anaesthetic is concerned, and the procedure is simple.

A vena-flask is filled with a 10 per cent. solution of chloral hydrate in water with 1 per cent. sodium citrate and 1 per cent. sodium chloride added, as recommended by Wright.

The horse is twitched and the needle thrust into the jugular vein, the flask being held high to allow the solution to run in. The animal will begin to sway slightly and he should now be steadied to allow as much solution to run in as is possible before he goes down. The needle is pulled out as he falls, which is usually done quietly without struggling, the horse now being in a state of deep narcosis. Deep anaesthesia may be induced by the further administration of chloral, but I prefer to carry on from here either with local anaesthesia or the administration of chloroform, depending on the job in hand. The points I wish to make are, that the horse has been cast and put in a state of deep narcosis with no bother at all, and that the casting tackle is contained in the small compass of a vena-flask.

Repeated doses of chloral hydrate seem to do little harm. Some time ago I did a canker operation on a horse which was very difficult to handle. The operation was done under intravenous chloral and plantar nerve block, without any trouble, but we found it quite impossible to carry out the routine dressings in the usual way. The animal had to be put down each time with chloral and this was done 14 times, at intervals of two or three days. I think he became an addict, because latterly he appeared to look forward to his chloral, holding up his nose for

* Presented to the West of Scotland Division, N.V.M.A., at Glasgow, December 26th, 1947.

the twitch to be put on and patiently waiting for the solution to run in.

Eventually he made a complete recovery and after all this, still had functioning jugular veins, while his liver also must have continued to function unimpaired.

Another awkward animal has been operated on three times, at intervals of a year or thereabouts, for large multiple tumours involving the sheath, using intravenous chloral followed by chloroform. The last time I operated I meticulously dissected out every sign of tumour I could find and must have removed nearly a bucketful of tissue. I sutured up as I went along, and obtained quite a good cosmetic result. The animal was under deep anaesthesia for nearly two hours and so far has shown no ill-effects. No doubt next summer he will have to be operated on again.

In the bovine, results with intravenous chloral are not so uniform, with excitement and movement sometimes occurring. In assessing the dose, the solution of chloral hydrate may be administered to the bovine until a pin prick to the nose ceases to get a response, but no further. Any further augmentation of the degree of anaesthesia should be local or by chloroform inhalation.

The horse that is difficult to handle while being shod is occasionally encountered and chloral hydrate given by mouth shortly beforehand is very useful in this type of animal.

Pethidine hydrochloride.—The other afternoon, however, a client 'phoned up to say that he had a horse which the blacksmith was unable to shoe and would we come out and give it something. I thought this was an excellent opportunity to try out pethidine hydrochloride.

A solution of 600 mgm., or 12 c.c., was decided on as a suitable dose and this was given intravenously. In about five minutes the animal was quite docile and gave no trouble while being shod. This drug, then, shows promise of being very useful indeed in the horse.

In the bovine, however, in my experience it is quite useless. I was asked to re-ring an aged Ayrshire bull. The animal was a quiet enough bull but would not allow any interference with its nose. A student present said: "Surely you can inject something to dope it a bit." I thought perhaps pethidine would be the answer. It was impossible to inject anything intravenously without adequate restraint so the injections were given intramuscularly, 2,000 mgm. being given in the space of half an hour, but there was not the slightest sign of any effect at all and brute force had to be used instead. The animal was roped up and allowed to struggle until the natural narcotic of exhaustion allowed us to slip in a new ring before he got his breath back.

In view of the student's remark, I thought it rather interesting, that even in 1947 there seemed no expedient substitute for forceful restraint in this particular case.

Painless Dehorning of Cattle

Although the Anaesthetics Act makes the dehorning of cattle under local anaesthesia illegal, the combined method as described orginally by Emmerson, and later by Wright, Quin and others, seems attractive.

I have found the technique difficult, however, and rather uncertain. This may be because I have tried it only on one or two adult Ayrshire bulls.

Quin says that with practice the method takes but a moment and docile cows can be dehorned while being held at the halter.

In Wigtownshire unfortunately they do not dehorn this type of animal, reserving that distinction for bulls that have become troublesome or potentially dangerous, which makes quite a difference!

I should think, however that where a large number of cows were to be dehorned, local anaesthesia would be a great saving of time and trouble, the animals being injected one after the other and then dehorned in turn.

When dehorning a bull myself, I have it tied in a stall like a cow. A halter is put on and the animal's head pulled over the stall division and the rope pulled through the metal runner of the neck-chain in the next stall. A hitch helps to keep it tight so as to reduce movement of the animal's head to a minimum.

Two pieces of cotton-wool impregnated with chloroform are now held over the nostrils until the bull is lightly anaesthetised. The amount of struggling varies greatly. With the majority of animals little takes place and they eventually lean back on the chain and the horns can be sawn off with little trouble. Others struggle a good deal and have to be put right down before sawing is possible. Pads of cotton-wool with a sulphonamide are now placed on the horns and tied in place with sacking and binder-twine, prepared beforehand. The whole process need not take more than ten minutes, and compares favourably with local anaesthesia where an interval of ten to 15 minutes must be allowed for the anaesthesia to take effect.

The hack-saw blade is an important item, and one having about ten teeth to the inch seems most suitable, going through even thick, old horn quite easily and quickly.

Rumenotomy

This is a very useful operation, but is inclined to become a little too popular with the farmer.

I use the method described by Udall. After exposing the rumen, four tape loops are inserted and the rumen pulled well out by two assistants, one on each side of the operator. This allows the rumen to be opened and the arm inserted and withdrawn without much contamination of the wound.

The rumen is closed with two rows of continuous Czerny-Lembert sutures, using No. 3 or 4 catgut. My procedure from now on is not always the same but usually I suture the peritoneum and each layer of muscles separately with continuous catgut. For some reason it seems easier in some animals than others. Sterile sulphathiazole is insufflated at each stage. Now with regard to closing the skin wound. I have discarded tape for this purpose entirely and use instead No. 8 nylon, in mattress sutures tied over rolls of gauze or bandage. Everything is sterile of course, including the gauze rolls. The wound is closed up completely, and no provision made for drainage because healing by first intention is expected. If it does not take place, a stitch can easily be removed later, but this is seldom necessary. As far as anaesthesia is concerned, the easiest form is undoubtedly the infiltration of plenty of local anaesthetic in the form of a large "T" in the flank, on the left for rumenotomy and on the right for laparotomy—for, *e.g.*, caesarian section, or the relief of a twist of the uterus which will not unroll in the orthodox manner.

Two and a half per cent. stovaine is probably the best anaesthetic to use as it does not inhibit the sulphonamides.

Paravertebral block anaesthesia is certainly effective if you can get it right, but I have found the technique a little difficult. I do not see how it is possible in a fat animal such as a fat Shorthorn bull.

In a thin Ayrshire cow, however, the landmarks are easily enough made out, *viz.*, the top of the last rib, and the lateral processes of the 13th thoracic and first, second and third lumbar vertebrae. Unfortunately, the point of emergence of the nerves between the processes varies considerably, and cross branches also occur, so that one has to be lavish with the anaesthetic to be sure of success. Theoretically, of course, it should be possible to anaesthetise the whole flank and much of the viscera with only a few c.c. of solution, but in practice it hardly works out this way. The technique, however, is well worth persevering in, I think, in suitable cases.

Johne's Disease

This disease gained a certain prominence when the survey scheme was introduced but I always felt it was an unfortunate choice for inclusion in this scheme.

It seemed very rare in Wigtownshire, and of course when the odd case was encountered, slaughter of the offending animal was all that could be advised. Real control of the disease was impossible as its onset was insidious in the extreme, diagnostic reagents were unreliable, and treatment of the clinically affected was quite useless.

Johne's disease does seem to be on the increase, however, in Wigtownshire, and one must consciously be on the look out for it.

As far as diagnosis is concerned, there is only one reliable method, which is unfortunately both tedious and unpleasant, and that is the demonstration of the bacilli in a scraping from the bowel wall.

Collecting a sample of the bubbly faeces from the grip and posting it to a laboratory is, unfortunately, quite unreliable.

The scraping is taken by inserting the arm into the rectum as far as possible and then withdrawing, keeping the finger nails scratching into the bowel wall as the hand is drawn along. This is repeated one or twice and what has collected under the finger nails is now removed with the blade of a pocket knife and placed in a bottle or suitable container. The material, very small in amount though it is, is now mixed with water and spun down at 2,000 revolutions for about 15 minutes or more. A film is now made from the resulting deposit and stained by Ziehl-Neelsen.

In most cases of Johne's disease the field will be fairly crowded with acid-fasts, and their presence along with the history of scouring, even though recent, is diagnostic enough.

Recent work suggests that Johne's disease is spread during the first few days of the calf's life, by sucking contaminated teats,

Contract Practice *

By

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When I originally agreed to open this discussion, postponed from our last meeting, I did so because the subject of a new Survey Scheme is due to come up for discussion by the Council of the N.V.M.A. at an early date and the views of this Division will be most helpful to your representatives.

In my opinion failure to negotiate a new Control Scheme will be little short of a tragedy for the backbone of the profession—the general practitioner; it will also be a tragedy for the profession as a whole and the nation. The survey scheme of 1942 was introduced to meet a national crisis in war: we are told that the nation is in a state of crisis again and most industries, including agriculture under the reformed County Executive Committees, have been organised to meet this situation. It is an unfortunate fact that this profession has no organised plan to show to the public. Whatever the merits and demerits of the old survey scheme, it did present an organised plan from the profession in the National Press; it did teach farmers, both those who contracted and those who did not, what the veterinary surgeon could do and, in no small measure, it taught many practitioners a lot they did not know before the scheme started. It is fair to say that the 1942 scheme, although not so widely supported as was hoped, carried the profession a great step forward in the eyes of the farming community.

As a practitioner who has been, and still is, working the survey scheme in a district largely devoted to dairy farming, I hope that these few remarks will stimulate a constructive discussion on the possibilities of starting a new form of contract practice for the benefit of the farmer and the profession.

In my opinion any new scheme for dairy cattle must be entirely comprehensive, covering all diseases, ailments and accidents, whether large or small. The idea of a comprehensive contract is no new one to this profession; contracts have been made in horse practice for a great number of years with eminently satisfactory results to both parties, and contracts have been made privately by many practitioners with their farming and other clients in various ways—covering, perhaps, a limited species on the premises or, perhaps, the cost of medicines.

There are two main reasons for stressing that any new scheme must be comprehensive. The first is in deciding the limits of a limited scheme—for example, many will remember the confusion in the early days of the survey scheme as to whether the removal of retained placenta in the cow should be included under the contract fee; eventually the official ruling was that it should not. I have always thought this decision wrong in view of the number of cases of sterility produced by this condition, but I do not believe that this point was considered when the Scheme was drawn up. There has, I believe, been a suggestion that a contract covering "advice" *only* should be made; to my mind this is utterly impossible, especially in Somerset, where farmers expect to receive advice free on any subject and given in any situation, even at a Hunt Ball! Possibly we are backward in the county of Somerset, but I do not believe that the "sales value" of such a contract would be high anywhere—which leads me to my second point in stressing the importance of a comprehensive contract: it must appear attractive to the farmer, for it is on numbers alone that a contract scheme can become financially attractive to the practitioner. This fact is the essence and basis of all contracts—that everything does not go wrong everywhere at the same time. I am quite convinced that very many farmers would now join in a comprehensive contract scheme and the original survey scheme must be given a large amount of credit for this and for raising the standard of consciousness to disease of many farmers.

I have heard the view expressed that it would be dangerous to start any contract scheme now as it might help the present Government to decide to nationalise the profession; in my view this view is completely untenable. To make State practice work it is necessary for both sides to "play," as has been found with the medical profession, and I am certain that, in our case, the farmer would be on the non-playing side. Nationalisation of our profession would mean the same thing having to happen to the farmer, and, to carry matters to a logical conclusion, there would have to be, in compulsory State contracts, a clause carrying penalties to the farmer for failure to call in his veterinary surgeon sufficiently early. This situation is one which, I am sure, some of us would like to see occasionally in the badly neglected cases we sometimes have to deal with, but in the long run I am certain it would be disastrous to both sides!

In my view the danger of State interference will be far less if we can start a comprehensive contract scheme and run it to the satisfaction of ourselves and the farming community, this time without the doubtful assistance of the Ministry of Agriculture in supplying drugs or vaccines. In view of the failure of Weybridge to produce abortion vaccine in sufficient quantity at the right time over what is now a period of years, I feel that private enterprise should be given an opportunity to show that it can deliver the goods.

I have heard of another objection to contract practice; it is that farmers will take advantage of it frequently to call the practitioner in to trivial cases at awkward times. In actual fact, as shown by experience with the survey scheme, this argument does not hold water and, in many cases, the emphasis is on the other side. In spite of education, many farmers do not call one in sufficiently often, frequently preferring to deal with trivial matters themselves—in many cases to the detriment of the patient. In any case should this objection have real grounds the remedy is simple—the contract should have a proper termination clause, in common with any other deed of contract, and this can be brought into force. However, this argument is the main one against any compulsory or State contract scheme, and any Government introducing such a system would have to be very sure of having sufficient numbers in the profession to meet such eventualities. Nevertheless, it is the view of many that the profession will be supersaturated with graduates within the next few years, and even a privately operated contract scheme would help to absorb many of them. We all know that there is still a large number of animals which die or become uneconomic because veterinary attention is not sought for one reason or another, and there is still an enormous field of work which we do not touch but in which, I am sure, we can provide an economic gain for the farmer and the nation. In my view, the way to reach this field is by a contract scheme which is attractive to both farmer and practitioner. I have purposely kept off any financial provisions as they, undoubtedly, will be the stumbling block to both sides unless taken, from our view, in the true perspective of numbers. It is not difficult to calculate the total number of adult dairy cows in one's practice and to work out the gross return at a fee basis of, say, £1 per head per annum, with young stock at a proportionate figure. One of the difficulties envisaged is that of checking the true head of stock on a farm. I maintain that any discrepancy would be a mere drop in the bucket and that the same argument applies here as elsewhere—that any farmer wishing to behave this way would be unlikely to make a contract and that a contract scheme will really interest the educated farmer only at first; this is the weakness of any non-compulsory scheme, that one is preaching to the initiated farmer. It is only by showing that we can do the work and give value for money that we can hope to extend it largely to the more backward.

From the practitioner's point of view, the increased work should lead to increased staffs with the opportunities for specialisation and better work which lie therein. Personally, I have come round to the view that a limited degree of specialisation in practice is becoming essential; increasing results of research in both the small- and large-animal worlds place an ever-increasing strain on the busy practitioner and may tend to lead to a loss of up-to-date efficiency. In the past, economic considerations have often made even limited specialisation within one practice quite impossible, but the stabilisation of income, both actual and expected, produced by working a contract scheme should help to resolve the problem.

I have dealt so far mainly with the arguments in support of a national contract scheme between practitioners and farmers; I now propose to deal with the arguments against such a scheme. In my view, facing the matter fairly and squarely, it boils down to the question of a fee satisfactory to both parties, and, personally,

* Opening contribution of discussion by Western Counties Division, N.V.M.A., at Plymouth, June 24th, 1948.

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and bucket-feeding from birth is advised as a control measure. It is significant that in most dairying districts calves are bucket-fed from birth and the disease is not common. However, with the prevalence of *B. coli* septicaemia or scour in calves fed this way, many farmers are finding a distinct improvement when the calves are suckled for the first few days. It looks as if measures to curtail one condition may result in an increase of an equally objectionable complaint.

Perhaps in the discussion it can be decided which is the lesser evil.

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I do not think that such a fee can be negotiated: the farmer, having had a great deal of professional advice at little cost or none at all, and having paid for what one may call factual work only, will be appalled at the total fee payable on a *per capita* basis; while the practitioner will also be appalled at the possible amount of work he will have to do for a fee low enough to satisfy the average farmer. A possible solution to this problem might be financial assistance from the Ministry of Agriculture in the form of payment to the practitioner or the farmer of a portion of the agreed fee for every animal shown in the contract. I feel that this, or another similar form of subsidy, would be infinitely preferable to the method of supplying drugs and biological preparations free or at cost price; as has been found already in the survey scheme, this method has a bad effect on the freedom of the practitioner's line of treatment unless the list of subsidised materials is kept well up to date. There is also the danger—no small one, as has been found—of shortage of supplies.

To summarise the arguments—the advantages of a contract scheme to the practitioner are: stability and increase in gross income leading to increased staff in the practice and greater efficiency thereby; secondly, the opportunity of doing more and better work without being bound so much by the fee question—this should lead to increased confidence and co-operation from the farmer—and, finally, the chance of receiving payment for the numerous bits of advice so often, at present, handed out gratis.

As we are all veterinary surgeons here, I need only say that the advantages of such a scheme to the farmer must be obvious!

The disadvantages of an overall contract scheme are: the difficulty of negotiating a satisfactory fee bearing in mind that, to the practitioner, safety lies in numbers; secondly, the difficulty of working a contract economically with the fussy or possibly malicious client and, finally, the danger that by starting such a scheme we may draw attention to ourselves as material for nationalisation.

SHEEP CROSSING EXPERIMENTS FOR FAT LAMB PRODUCTION

In an experiment carried out in Yorkshire by the Department of Agriculture of the University of Leeds in conjunction with the Yorkshire Council for Agricultural Education, the value of ewes bred by crossing Swalesdale ewes with rams of the Border Leicester, Suffolk and Wensleydale breeds, has been assessed in terms of their ability to produce fat lambs off grass in summer when crossed with Hampshire rams. Two groups of ewes were studied, the first group being born in 1934 and kept at Askham Bryan from 1934 until 1941, the second group being born in 1937 and kept at Askham Bryan from 1937 until 1943. Comprehensive records were kept of the original Swaledale ewes, of the first cross wether and ewe lambs, and of the second cross lambs by the Hampshire rams. These records have been studied with the following objects:—

(*a*) To ascertain which cross is most profitable for the Hill Sheep farmer to breed, in respect of the sale of ewe lambs and wethers produced.

(*b*) To ascertain which of the three crosses of wethers left the greatest return after wintering and fattening on roots.

(*c*) To ascertain which of the three crosses of ewes when kept on a lowland grass farm over a period of years was most successful for summer fat lamb production.

The most important object of the experiment was that described under (*c*). From the records kept it was possible to study the longevity, prolificacy, fertility and rearing ability of the ewes, and the inherent capacity of their lambs to thrive, grow and fatten, under uniform conditions. In terms of gross return per ewe brought on to the farm and mated initially, the Swaledale-Suffolk cross gave the highest return of £17 18s. 5d. per ewe, the Swaledale-Wensleydale cross gave a return of £15 4s. 7d. per ewe, and the Swaledale-Border Leicester cross gave the lowest return of £14 3s. 8d. per ewe. The differences in results were primarily due to the variation in longevity of the ewes, fertility and rearing ability. The combination of superiority in these respects was largely responsible for the best results being obtained from the Suffolk cross ewes.

In respect of object (*a*) the results are too inadequate to provide a sound recommendation. Under the conditions of the experiment, however, the Swaledale ewes crossed with a Wensleydale ram gave the highest return.

In respect of object (*b*) the Suffolk-Swaledale cross wethers gave the highest average sale value, but at the same time required a longer period of time and hence more food and more labour than the Border Leicester-Swaledale and Wensleydale-Swaledale crosses.

CLINICAL COMMUNICATION

Suspected Salt Poisoning in Pigs

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Slavin and Worden (1941) recorded experiments designed to produce poisoning with sodium chloride, in which they gave salt in the food and by direct dosing. They were unsuccessful when salt was included in the food, as the pigs showed a disinclination to eat when the concentration was increased, and this might account for their failure to produce symptoms apart from diarrhoea in one pig. The fact that oral doses of up to 8 oz. to pigs of about 150 lb. produced only vomiting in one pig is more significant. Their failure to produce salt poisoning is remarkable in view of the fact that sodium chloride is generally regarded as being particularly poisonous to pigs. Worden (1941) in an exhaustive review of the literature on the subject, draws the conclusion that the poisonous properties of salt are not proven in pigs, and calls for more clinical as well as experimental observations.

In April and May, 1948, we were twice called in where deaths in pigs were subsequently diagnosed as salt poisoning.

FARM NO. 1.

Thirty pigs of eight to twelve score live weight were being fed exclusively on swill. A new consignment was first fed at about 6.30 one evening and none of the pigs was at that time observed to be ill. They were not seen again until 7.30 the next morning, when four were dead, and the owner stated that several others were showing the symptoms which are described below. During the next four hours five more pigs died and a further six were then slaughtered, all but one of which were passed for human consumption. One other pig was mildly affected and recovered. The remaining 14 showed no symptoms.

Symptoms.—With the exception of the mild case the symptoms were shivering fits, and an uncertain and abnormal gait. The pigs frequently moved slowly backwards with the hind legs tucked well forward and the back arched much like a horse backing a heavy load, a mode of locomotion which appeared to entail great effort; while at other times they stumbled forward and collided with anything in their way. As a result the heads of affected pigs, and particularly the ears, were lacerated. Blindness was characteristic. Death was preceded by prostration. The mild case was listless and off its food for three days, after which it made an uneventful recovery.

Post-mortem examination.—This was carried out on three of the pigs. Diffuse inflammation of the mucous membrane of the small intestine was observed in two of them, but only in one could it be called at all severe, and then only in small areas. No other defects were observed except the injuries on the ears and head noted in life.

Bacteriological examination produced negative results only. Chemical analysis for lead, arsenic, zinc phosphide and elemental phosphorus also gave negative results. Stomach contents from two pigs, and a representative sample of the swill remaining overnight were examined for chloride content with the following results:—

Swill (soluble extract): 0·24 per cent. as NaCl, 0·94 per cent. expressed on a dry matter basis.

Pig 1. Stomach contents: 0·92 per cent. chloride as NaCl (total), 4·2 per cent. on dry matter basis.

Pig 2. Stomach contents: 0·88 per cent. chloride as NaCl (total), 4·4 per cent. on dry matter basis.

It was only discovered some months later that a quantity of damaged salt which should have been thrown into the waste bin, was, in fact, thrown into the pig bin at the camp from which the swill was obtained. It was then too late to learn the nature of the damage to the salt, as the camp personnel had completely changed, and we can therefore only conjecture that it had become very damp.

FARM NO. 2.

Five pigs aged about ten weeks had been purchased about a fortnight before the outbreak. Their food consisted of half pail of milk with one-third to half of the contents of a swill tub. This was fed twice daily together with a small quantity of pig meal obtained from a reputable firm. The swill tub contents consisted of bakehouse waste, potatoes, green food and other scraps, but no meat, so that no boiling was carried out. The

owner commenced to use a new consignment of meal on a Friday and of bakehouse waste the following evening. On Monday morning two pigs were found dead in the sty without symptoms having been observed the previous day, and at the same time a third pig was noticed to be listless and disinclined to eat. The following morning it was stretched out on its belly with head arched back, and when made to move it exhibited inco-ordination of gait, blindness and thirst. Death supervened the same evening. The two remaining pigs, the smallest of the group, exhibited great thirst and became very constipated, the faeces being dark and firm. They recovered in the course of a week.

After the death of the first two pigs the owner consulted his veterinary surgeon who, suspecting erysipelas or poisoning, took the precaution of injecting the remaining pigs with serum to protect against the former condition. The proprietary food, being suspect, was also suspended, but on the death of the third pig, the swill, which contained the bakehouse waste, was analysed with the following result:—

1·35 per cent. chloride as NaCl, 10·1 per cent. expressed on a dry matter basis.

It is probable that the salt was obtained from the bakehouse waste as in the case recorded by Edwards (1918), but it was not possible to prove this as the suspect consignment was all in the swill tub, the remaining contents of which were destroyed. *Post-mortem* examination of all three pigs revealed a slight gastro-enteritis. Cultural examination gave negative results.

Discussion.

The analyses of stomach contents are not an accurate measure of the amount of salt consumed since absorption is rapid, but, on the other hand, the salt content recorded in the stomachs of two pigs on Farm No. 1 was high and might have been much higher a few hours earlier. As the swill was thick in consistency it is assumed that the salt was concentrated in certain parts of the tub contents, and the pigs obtaining the high concentration were affected, while others showed no symptoms. The representative sample of the remaining swill analysed for salt did not contain an excessive quantity.

Worden, after failing to kill pigs by forcible administration of salt, suggests that deaths following excessive salt consumption may be due to other factors such as bacterial toxin. It is remarkable, however, that the symptoms described by Edwards, and in other papers reviewed by Worden, were very similar to those which we observed, though the medium through which the salt reached the pigs varied. The availability of water or the lack of it at the onset of excessive thirst may exercise a decisive influence in the final outcome in many cases.

Summary

Suspected salt poisoning in pigs occurred on two farms due to the use of camp waste in one case, and bakehouse waste in the other. The symptoms are described and the analyses of relevant material are given. Some of the pigs were killed for salvage. The others either died soon after poisoning or made a rapid recovery.

Acknowledgment.—We are indebted to Dr. Ruth Allcroft, of the Ministry of Agriculture Veterinary Laboratories, Weybridge, for the chemical analyses and to Mr. T. A. M. Chambers, M.R.C.V.S., Wolverhampton, and Mr. Peter Robinson, B.V.SC., M.R.C.V.S., of Hinstock, for their co-operation.

References

Slavin, G., & Worden, A. N. (1941.) *Vet. Rec.* **53.** 694.
Worden, A. N. (1941.) *Ibid.* **54.** 695.
Edwards, J. T. (1918.) *J. comp. Path.* **31.** 40.

N.G.R.C. AND THE ANIMAL HEALTH TRUST

A Further £10,000 for Canine Research

For the second year in succession members of the National Greyhound Racing Society have contributed £10,000 to the Canine Section of the Animal Health Trust.

In forwarding a cheque to the Trust Sir Louis Greig, President of the Society, says that in spite of the adverse financial effect of penalising and discriminatory taxation imposed on greyhound racing during 1948, the Society's members have maintained their contribution because they regard the establishment of the research station as a national necessity.

They feel that this section is of equal importance in its field as the service given by the equine, cattle and poultry research stations now in operation by the Trust.

The Chairman of the Canine Committee of the Trust is Mr. F. S. Gentle, a Vice-President of the National Greyhound Racing Society, and the canine station is under the direction of Mr. S. F. J. Hodgman, M.R.C.V.S.

ABSTRACTS

[**Bovine Tuberculosis.** Ritchie, J. N. (1948.) *J. R. Sanit. Inst.* **68.** 503-508.]

Ritchie traces the development of legislation aimed at the prevention of transfer of tuberculous infection from cattle to man, and the control of bovine tuberculosis. Pasteurisation, or better, eradication of bovine tuberculosis greatly reduces bovine-type infection of man. Clinical examination removes gravely affected animals and, if combined with certain laboratory tests, may detect some early cases of tuberculosis, but does not ensure against tuberculous infection of the milk. Quite apart from public health the eradication of bovine tuberculosis is an important agricultural problem.

Under the Tuberculosis (Attested Herds) Scheme considerable progress has been made in recent years. In Great Britain, at the end of 1947, there were 30,436 attested herds, comprising 1,199,929 cattle, or 13·9 per cent. of the total cattle population. Progress has not been equally rapid throughout the country. England had 9,445 herds, with 518,412 cattle, or 8·3 per cent. of its total cattle population; Wales had 11,099 herds with 229,210 cattle, or 25·5 per cent., and Scotland had 9,892 herds with 452,397 cattle, or 31·0 per cent. A few counties are outstanding. Zetland has now all its cattle in attested herds. At the end of 1947 the proportion of attested herds was Bute, 84 per cent.; Ayr, 79 per cent.; Cardigan, 72·5 per cent.; Carmarthen, 64·6 per cent.; Dumfries, 61·6 per cent.; four counties in Scotland, from 50 to 60 per cent.; four in Scotland, two in Wales and one in England, from 30 to 50 per cent.; five in Scotland and two in England, between 20 and 30 per cent. In addition, it should be noted that there are approximately 250,000 cattle in herds which are not attested but produce T.T. milk under licence.

The adoption of area eradication has been advocated largely because it would reduce the danger of clean herds becoming reinfected. In order to eradicate tuberculosis from all the herds in an area it would clearly be necessary to have some compulsory powers to deal with a few backward owners or heavily infected herds. When area eradication is begun, it will probably be necessary to slaughter reacting animals within these districts.

J. F.

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[**Bovine Pulmonary Tuberculosis.** Stamp, J. T. (1948.) *J. comp. Path.* **58.** 9.]

The bacteriology, pathology and pathogenesis of tuberculosis were actively studied during the first two decades of the 20th century; more recently the pathology of bovine tuberculosis has been neglected, and it was not until the work of Nieberle (1931) that any attempt was made to apply the newer concepts of the pathology of human tuberculosis to the bovine disease.

By a careful series of observations on slaughter-house material, Stamp has shown that in the great majority of cases primary infection is by the respiratory route and the first lesion occurs in the lung substance, followed by a lesion in the regional lymph gland. In the past many investigators have only observed the lesion in the lymph gland and failed to detect what may be a small lesion in the lung-substance. Nieberle divided bovine tuberculosis into calfhood and adult types similar to those observed in man (it is generally considered that in man the terms primary and reinfection types of tuberculosis are more correct than childhood and adult types). Tuberculous infection is, however, rare in calves, so if there is a calfhood and adult type of tuberculosis in the bovine the latter must be due to a resistance acquired with age. Stamp's work does not support this view, for although nearly all the animals examined by him were "adult," 89 per cent. of them showed caseation of regional lymph nodes associated with a lung focus. Stamp does emphasise, however, that a form of chronic isolated pulmonary tuberculosis does occur in the bovine independent of age, but in contrast to man, there is usually not a long interval of time between primary infection and the development of chronic bronchogenic tuberculosis. This form of pulmonary tuberculosis will be described in a later communication.

Stamp concludes that the native resistance of the bovine, at least in adult life, is comparatively low, for there is little pathological evidence in his series to suggest that the normal bovine body exerts any great restraint upon the progress of the first infection: in the majority of cases caseation is prominent and healing is inconspicuous while regional lymph nodes frequently become massively involved. The pathological evidence indicates that acquired resistance following primary infection plays the major role in altering the type of reaction that occurs in subsequent infection. In man (usually children) primary lesions often heal but this is not so in the bovine; in only 13 per cent. was there evidence of prompt healing, whereas in 40 per cent. the primary lesion was comparatively large and caseous, reaching in many cases 5 to 6 cm. in diameter. These lesions seldom

(*Continued at foot of col. 1, page 6*)

REPORT

[**Tanganyika Territory:** Report of the Department of Veterinary Science and Animal Husbandry, 1946. (Issued 1948.)]

Nearly half of Tanganyika Territory was completely free from rinderpest during 1946. In the remaining portions, the disease was suppressed by immunisation, 524,199 inoculations being carried out, using Kenya attenuated goat virus in over 450,000 of the cases. The Game Intelligence Service played a valuable part in keeping the veterinarians informed of the rinderpest position in the sparsely populated areas. The control of game, which more often than not were incriminated as the vectors of the disease, remained an unsolved problem. 837,000 c.c. of vaccine were produced during the year, and 302 cattle were slaughtered for this purpose.

East Coast fever continued to be the main cause of mortality among cattle moving along the stock routes, and the limiting factor as regards any increase of cattle population.

In most provinces there was a higher death-rate from trypanosomiasis because the drought affected pasture had forced the African stockowners to graze their cattle in tsetse bush to a greater extent than usual.

Cases of anthrax were reported from every province, and one outbreak caused the deaths of 68 out of some 2,000 head of cattle. Vaccine was used in over 125,000 instances. Blackquarter was equally widespread.

Foot-and-mouth disease was not serious, and no case of rabies was reported.

A census provided the following figures: Cattle 6,419,566; sheep 2,365,813; goats 3,165,445; pigs 7,150; donkeys 108,320; mules 94; horses 204.

On both the field and laboratory sides a shortage of veterinarians hampered the work of the Service.

G. P. W.

REVIEW

[**Pigs. Their Breeding, Feeding and Management.** By V. C. Fishwick, Pig Husbandry Research Station, South Eastern Agricultural College, University of London.]

In this book Mr. Fishwick has given the practical results of his years of scientific research. There is a wealth of practical information which can be applied to every-day pig-keeping with profitable results. This book is recommended to anyone who wishes to gain a good, sound, practical knowledge of pig-keeping in the shortest possible time, as Mr. Fishwick spares nothing in his efforts to make his points clear and practical. Many photographs and diagrams are supplied to explain details and the whole book is well laid out and easy to read. The book is published by Messrs. Crosby Lockwood and Son, Ltd., at the small cost of 12s. 6d.

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Also received: "Let's Learn to Ride." By Major-General Geoffrey Brook. Illustrated by Pamela Searight. Constable & Co., 7s. 6d.

Weekly Wisdom

". . . If every writer bore in mind more often that it is a large part of his business to entertain—I don't say the main part—how much better all writing would become."—Sean O'Faolain, The Short Story (Collins, 10s. 6d.).

"I doubt myself whether any writer with a lively mind and a care for language will ever allow himself not *to entertain. But the current taste for the heavy-fisted, the glum and the pretentious has certainly inflated the reputation of some dullards who in a happier world would never have been heard of. . . ."*—Raymond Mortimer's comment on the above, *The Sunday Times*, December 19th, 1948.

heal completely, and as already mentioned often give rise to a chronic bronchogenic tuberculosis. Because of these differences between the course of primary infection in man and cattle, Stamp feels that the term "primary complex" is misleading when applied to the bovine and should not be used.

J. F.

NOTES AND NEWS

Diary of Events

Jan. 5th, 6th and 7th, 1949.—Quarterly Meetings of Council and Committees, N.V.M.A., in London.

Jan. 5th.—Meeting of the Southern Counties Division, N.V.M.A., at Salisbury (Red Lion Hotel), 2.30 p.m.

Jan. 6th.—Meeting of the Central Veterinary Society, at the Royal Veterinary College, Camden Town, 6 p.m.

Jan. 7th.—General Meeting of Association of Veterinary Teachers and Research Workers (Southern Region), at Royal Veterinary College, N.W.1, 11.30 a.m.

Jan. 10th to 13th, 1949.—R.C.V.S. Council and Committees, 10, Red Lion Square, London, W.C.1.

Jan. 12th.—Meeting of Editorial Executive Sub-committee, 36, Gordon Square, W.C.1, 2.30 p.m.

Jan. 19th.—Meeting of the West of Scotland Division, N.V.M.A., at Glasgow (Central Station Hotel), 2.30 p.m.

Jan. 21st.—157th Annual Ball of R.V.C., at Grosvenor House,

Jan. 25th.—Meeting of the Derbyshire Division, N.V.M.A., at Sutton Bonington (Midland Agricultural College), 2.15 p.m.

jan. 28th.—Meeting of the Yorkshire Veterinary Medical Society at Leeds (Hotel Metropole), 2.30 p.m.

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Our Front Cover

With the first issue of the New Year we are glad to be able to introduce a change which we believe will be welcomed by our readers, in the replacement of advertising matter on the front cover of *The Veterinary Record*, by the Table of Contents. This alteration was accepted in principle by the Editorial Committee from its "Improvements Sub-Committee" some time ago, as presenting a non-commercial introduction to a scientific journal. Our ability now to accept full-page advertisements and thus to offer the occupiers of that position reasonable "alternative accommodation" enables us to put precept into practice. At the same time, the space now vacated by Messrs. Willows, Francis, Butler and Thompson is a coveted one, and, moreover, has been occupied by their announcements for so many years that many will share with us a sense of loss. The firm's readiness to sacrifice this particular advantage for the greater general gain, as a gesture of goodwill, is appreciated the more in that their front-cover order was accepted before the change became a possibility. The Committee, therefore, wishes to place on record in this issue, its indebtedness to Messrs. Willows for their co-operation.

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Appointment of Divisional Veterinary Surgeon for the Northern Division of the National Coal Board

Applicants who may be called for interview with regard to the above appointment are requested to contact the General Secretary, N.V.M.A., before they attend.

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PERSONAL

Mr. Aziz-ud-Din's Doctorate in the University of Edinburgh.—Mr. I. M. Aziz-ud-Din, B.A., G.M.V.C., B.V.SC. (Madras), Lecturer in Medicine, Veterinary College, University of Madras, was awarded the degree of Doctor of Philosophy, by the University of Edinburgh at the Graduation ceremonial on December 17th, 1948. Mr. Aziz-ud-Din's thesis was entitled "Studies on the Bacteriology and Pathology of Bovine Endometritis."

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Appointments.—Mr. B. S. Singh, M.R.C.V.S., formerly of Dehra Dun, has been appointed Professor of Animal Husbandry in the United Provinces' College of Veterinary Science and Animal Husbandry, Mathura, India.

The Colonial Office announces the appointment of Mr. R. S. Marshall, M.R.C.V.S., D.V.S.M., Principal of the Vom Veterinary

School, as Deputy Director of Veterinary Services, Nigeria; also of Mr. D. C. Hague, M.R.C.V.S., as Veterinary Officer, Kenya, and of Mr. J. Robson, B.SC., M.R.C.V.S., as Veterinary Research Officer, Tanganyika.

Births.—TURNER.—At the Woburn Clinic, Woburn Beds., on December 13th, 1948, to Audrey (*née* Abrams, M.R.C.V.S.), wife of Richard S. Turner, a son—Brian—brother for Michael.

MEIKLEM.—On December 17th, 1948, to Molly (*née* Evans) and R. K. Meiklem, M.R.C.V.S., of Birkhill, Nemphlar, Lanark, a son—brother for Justina.

. . . . .

ADDRESSES OF DISEASE-INFECTED PREMISES

The list given below indicates, first, the county in which are situated the premises on which disease has been confirmed, followed by the postal address and date of outbreak.

FOOT-AND-MOUTH DISEASE:

Sussex (*West*).—No. 20 Holding, Walberton, Arundel, Sussex (Dec. 19th); Honer Farm, South Mundham, Chichester, Sussex (Dec. 20th); No. 21 Holding, Walberton, Arundel, Sussex (Dec. 21st).

SHEEP SCAB:

Flints.—Bwlch, Meliden, Prestatyn, Flints. ; Panterwyn, Bryniau, Dyserth, Flints. (Dec. 16th).

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LEGAL NOTES

FARMER FINED FOR RINGING DOG'S NOSE

At St. Clears (Carmarthen) Magistrates Court, John Jones, a farmer, was fined £5 with £7 7s. costs for causing unnecessary suffering to a sheep dog by inserting a ring through its nose with the object of checking its tendency to worry cattle. Following a visit by an R.S.P.C.A. inspector and a veterinary examination the dog, with the owner's consent, was destroyed. The dog's head, with the ring still *in situ*, was produced in court.

Opening the case for the (R.S.P.C.A.) prosecution, Mr. Emrys Morgan said: "Rings of this kind are used in the case of bulls and pigs, but such animals cannot be compared with a dog. A dog's nose is the most sensitive part of its anatomy, and one can imagine the suffering the animal must have undergone during that fiendish operation and during the time the nostrils were healing. In the view of the prosecution, the act of cruelty in this case was a particularly horrible one, and I ask your worships to inflict such punishment as will be a severe lesson to this defendant and would also deter others from following this vile practice."

Evidence of having examined the dog was given by Mr. Thomas Roger Thomas, M.R.C.V.S., Carmarthen, who said the ring was in the same position as those placed in bulls. He tried to get hold of the ring, but the bitch objected. There was a smell coming from the nostrils, as from a cut with congealed blood, and the condition of the bitch was poor. The ring was not in a clean state, and, in his opinion, the operation would have caused pain, and a continual pain. Witness referred to similar operations in bulls and pigs, stating that after a few days they seemed to show no ill-effects. The dog, however, depended on its nose for a living, and was very sensitive at that point. When he examined the dog the ring was still causing unnecessary suffering. Witness explained the difference between a bull's, pig's and dog's nostrils. He was of the opinion that defendant could have used a muzzle or strap, which could have been removed when not required.

Mr. Denzil Evans, M.R.C.V.S., Carmarthen, said puncturing the septum was an operation usually carried out in bulls and pigs, but relatively there was no difference between the thicknesses in those animals and that of a dog. In every operation on animals there must be a certain amount of pain. The ring in the nose of any animal caused a certain amount of suffering, whether it was a bull or a dog. He did not agree with the muzzling of dogs. Witness said he was not condoning defendant's act and if he were asked to insert a ring of that kind in a dog's nose he would refuse.

In his submission for the defendant, Mr. H. Lloyd said that so far as the insertion was concerned it must have caused a certain amount of pain. If the charge meant continual pain, it was a different matter. Some time in history somebody thought a bull was savage, so rings were inserted in their noses. They had heard the veterinary surgeons' evidence regarding the septum; for some reason rings in the noses of bulls and pigs were sanctioned, but in most cases it must cause unnecessary suffering. He could see no difference between the cases, for if dogs were muzzled they would not be able to protect themselves.

"Horse Trade"

In the article by Mr. George Goodwin, reproduced below from the issue of *The Spectator* of November 26th, an informative review is given of the facts of a position which increasingly is causing grave concern.

A century ago the horse was a valuable animal. It is a valuable animal still. But with a distinction. In 1848 a horse was valuable alive; in 1948 it is most valuable dead. In 1848—a lean year—the horse was the engine of the food-producing farm. The tractor has changed all that. Farmers, being highly mechanised, to-day can dispense with their horses, and so, on the land as on the road, the horse is a back number.* Even so, there is a very large demand for horses to-day, for hunters, yearlings, ponies, colts, shire harvesters, for mares in foal. This demand is to supply the great black market in horse flesh that has sprung up since the end of the war and, in particular, during the last 18 months.

It is not possible to give the total number of horses that are being put down week by week in the slaughterhouses throughout the country, because it is not incumbent upon any authority to make such returns. But all estimates made reach the same conclusion, namely, that if the present rate of destruction is allowed to go on, the survival of the species in the British Isles will be in jeopardy. Mr. H. Sutcliffe, speaking in the House of Commons on October 28th, said that since January 1st, 1945, 162,654 horses, many good animals, some mares in foal, some just-born foals, have been put down to supply this great market. The National Union of Farmers last August expressed alarm at the seasonal shortage of farm horses, and called for a special investigation and report upon the present drain to the slaughter yards. Up and down the country farmers and breeders have expressed the same fears, and condemned in round terms the great traffic in useful and young horses, many with years of working life in them. No other commodity offers to the black market operator so few obstacles. It is perfectly legal to buy for putting down horses of all descriptions, not excluding mares in foal, so long as the provisions of the Export of Horses Act, 1937, and the Knackers Act of 1786 are complied with. Thus there is no legal impediment to unlimited slaughter of the nation's horse stocks, and the present tendency is towards the intensification of the process as profits soar.

The sale of horse flesh for human consumption is subject to price control and to inspection as to fitness for consumption. The wholesale price of horse flesh legitimately dealt in is 8½d.; the retail price is one shilling. On the black market the price soars to 3s. 6d. a pound; and the flesh of foals, treated to pass as veal, to even more. The buyer for this market operates mainly in two ways. He buys direct from the farmer (often arriving with car and horse box trailer) or he buys at auction. The farmer is seduced by the artificially high price offered him. He regards the deal as good if the proceeds secure for him a tractor; while the auction buyer for use is knocked out of the bidding by the same method. Horses whose value for use would be in the neighbourhood of £25 to £30 change hands at £60 for putting down; and even at that high price the buyer makes a profit. The value of a horse is said to be around £100, that is for the flesh, hair and hooves.

Animals thus bought at places scattered throughout the country are transported by road and rail to central points for slaughter. The road journeys are often unduly long—for example, from Doncaster to London—and those by rail also, since, owing to shortage of rolling stock and other factors, horses are shunted into sidings without proper provision for water and feed. This is not to suggest that British Railways are callous. There is no evidence of that. But it is clear that the enormous increase in this type of traffic is difficult to handle without delays. There have been cases, too, such as that at Temple Mills Station, Leyton, where much suffering has been caused by overcrowding in the yards under conditions sufficiently bad to bring the local police into the picture.

In Rochdale, a large centre receiving mainly horses from Ireland, they are commonly led in droves through the town to the abattoir, and this practice is causing considerable local feeling. Elsewhere, too, incidents have been reported that suggest a growing public feeling against the holocaust of horses clearly in good condition and of economic value. Last year 2,975 horses were put down in this town, where, before the war, there was but one horse flesh shop whereas to-day there are three. In passing, it is worth noting that a horse flesh shop in a good locality makes profits up to £600 a week. A distinction, however, must be kept in mind between the legitimate trade in horse flesh for human consumption and the black market traffic. According to Mr. Ernest Upton, former chairman of the Licensed Horse Slaughterers' Association, this illegal traffic has sprung up because of the limited supply of rationed meats,

* While as a general statement this may "pass muster," there are important reservations to be made, well known to our readers.—EDITOR, *Veterinary Record.*

and is operated by men not previously connected with the reputable trade.

This association has been very active in combating the black market, and has put before the Ministry of Food suggestions for stamping it out—suggestions not as yet acted on. These proposals include the following safeguards and provisions: (*a*) slaughtering of horses for human consumption only in those establishments licensed before the recent war. Licences issued since 1939 to be withdrawn; (*b*) price control of horses per live cwt.; (*c*) veterinary supervision of slaughtering, especially for horse meat for human consumption. All these are proposals from men who know this trade from the inside and know, also, something of the deplorable state of affairs which has developed with the mushroom growth of the black market. Before the war there were, throughout the country, 179 licensed establishments; to-day there are over 400.

Veterinary supervision is highly desirable for two purposes—to prevent the destruction of sound horses, mares in foal and new or recently born foals and to stop the slaughter of diseased animals and the sale of diseased flesh for human consumption. There is evidence that to-day the black market, which consists mainly of certain hotels, restaurants, cafés and sausage manufacturers, is handling horse flesh quite unfit for human consumption.

There is good reason to suspect that the whole illegal traffic in horses is to-day in the hands of a small group of operators. They are highly organised and adroitly covered. These men have come into this trade since the war, and are in no way connected with its legitimate aspects. They are making large profits by putting down horses without any sort of discrimination. In one recent case—and there are doubtless many others—a hunter was sold and put down for this illegal market. It is hard to believe that beautiful horses, fine brood mares and promising foals are bid for for the slaughterhouse. Yet so it is. Mr. Sutcliffe has put forward a suggestion to remedy this state of affairs. He advocates the veterinary inspection of all horses before slaughter and certification by a qualified veterinary surgeon that they are unfit for further agricultural or economic uses. Such inspection might halt the present drains upon our stocks; but only a full official investigation by the Government by way of public enquiry can lay bare the extent and the ramifications of this illegal trade.

Because we are machine minded to-day the fate of the horse is of small account. Because many crave meat the official eye is closed. For centuries the horse was an integral part of our national economy. It is so no longer. Even so, it may become of vital importance again. But you cannot have your horse and eat him.

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JOINT HACKS, COBS AND PONIES MEASUREMENT SCHEME

Horse and Hound reports that at a recent meeting of the stewards of the joint measurement scheme, the 1948 season was thoroughly reviewed and the financial position was considered satisfactory. There had been five objections during the season. It was pointed out that the cost of dealing with objections greatly exceeded the £5 deposit which was laid down in each case, and if in future years there were a large number of objections during one season, it might be necessary to call upon the four horse societies concerned to give financial assistance towards an objection fund.

The 1949 panel of official measurers will be printed shortly, and will be available for distribution at the beginning of the New Year, as will copies of the rules, which have been slightly amended in one or two instances.

Rules have been added to the following effect:—

(1) That the measuring stick used by official measurers must be fitted with a spirit level.

(2) Rule M. will read as follows: "The decision of the referees shall be final and binding. In the event of disagreement between two referees, the matter will be reported to the Secretary, 66, Sloane Street, London, S.W.1, for reference to the Royal College of Veterinary Surgeons, with a view to the animal being measured at a veterinary college. The decision then taken shall be final."

(3) Rule P. will read as follows: "In the event of the animal coming within the height required, the £5 deposit will be forfeited, and the measurement certificate endorsed, rendering it immune from further objection."

This means that once an animal is passed by two referees as a result of an objection it is immune from further objections.

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STUDMEN'S COURSE AT NEWMARKET

"The problem of an adequate supply of stud grooms, properly trained for the great responsibilities of their position, is one of serious concern to the bloodstock industry," states *Horse and Hound* in a recent issue and continues: "Many men well equipped for their work by long experience will soon have to be replaced on account of age. On the other hand, more and more animals are being put to stud and values are high, and something must be done to avoid an acute shortage of trained men.

"At the Thoroughbred Breeders' Association meeting in December, 1946, it was suggested that the absence of training in the past could be to some extent remedied by an intensive course of instruction in the fundamental principles of stud management, based on scientific knowledge, which has made great advances in recent years. The matter was taken up with the Animal Health Trust with the result that an experiment likely to prove of great benefit to the bloodstock industry was begun at Newmarket on November 2nd, 1948, when a course for studsmen began at the Equine Research Station.

"This course, the first of its kind ever held, was designed to give the stud groom of the future a solid grounding in the problems with which he will be expected to deal, not those which demand the services of a veterinary surgeon.

"An excellent syllabus was devised in which demonstrations and practical work played an important part. The instructional staff included four veterinary surgeons on the staff of the Equine Research Station, three veterinary surgeons engaged in thoroughbred horse practice (Mr. E. Brayley Reynolds, Mr. Fred Day, and Mr. R. C. Crowhurst), Mr. Walter Earl, the prominent trainer, and Mr. Walter Griffiths, probably the best-known stud groom in the world.

"Eight first-class studs rendered invaluable assistance by arranging personally conducted tours, in the course of which the studmen were shown various methods of stud management, layout and construction. The men, who showed intense interest in their studies, expressed great appreciation of the course.

"Owing to the number of applications from studs, the 12 vacancies on the course were allotted by ballot. Of the successful studs, six are located in the Newmarket area, four in the rest of England, and two in Eire."

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The world will starve unless all the nations in it, putting aside war, severally and collectively, pursue an aggressive agricultural policy to bump up food production.—*Sir Hartley Shawcross, Attorney-General.*

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Corrigenda.—"*C. pyogenes* in bull semen" (J. L. Hancock and W. R. Kelly) *Vet. Rec.* **60**, No. 51 (December 18th, 1948):

Second paragraph in column 2 (*p.* 669) commencing, "All the animals mentioned in Table I, except bull D," should read, "All the animals mentioned in Table I, except bull 22D."

Last paragraph of the Results (*p.* 670) commencing "The withdrawal from service of carrier bulls" should be followed by "was often associated with a reduction in the incidence of infertility" and not "*of fertility*" as published.

CORRESPONDENCE

The views expressed in letters addressed to the Editor represent the personal opinions of the writer only and their publication does not imply endorsement by the N.V.M.A.

Correspondents are requested to write as briefly as possible.

THE INCIDENCE OF TUBERCULOSIS IN THE HORSE

Sir,—The incidence of tuberculosis in horses, at least in well-nourished horses, would appear to be very low, only three cases of tuberculosis having been observed in this area in some 80,000 horses sent for slaughter for human consumption during the last six years. In two of these cases the lesions were typical of the horse, in that the spleen and cervical vertebrae were involved, but in the other case the lesions were similar to those associated with cattle, chronic tuberculous lesions being present on the serous membranes.

I have been informed by the chief sanitary inspector of another district where horses are slaughtered for human food, that only two horses with this disease have been observed in 11,000 inspected.

Hutyra & Marek (third edition) state that in Germany the percentages of horses rejected for this disease during meat inspection vary from 0·15 to 0·38.

It would be interesting to hear from others engaged in the inspection of horse carcases in this connection.

Yours faithfully,

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